

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number  
**WO 03/107589 A1**

(51) International Patent Classification<sup>7</sup>: **H04L 9/32,**  
G06F 1/00

M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(21) International Application Number: PCT/IB03/02340

(74) Agent: **GROENENDAAL, Antonius, W., M.**; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(22) International Filing Date: 27 May 2003 (27.05.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02077423.8 17 June 2002 (17.06.2002) EP

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LENOIR, Petrus, J.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **TALSTRA, Johan, C.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **VAN DEN HEUVEL, Sebastiaan, A., F., A.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **STARING, Antonius, A.,**

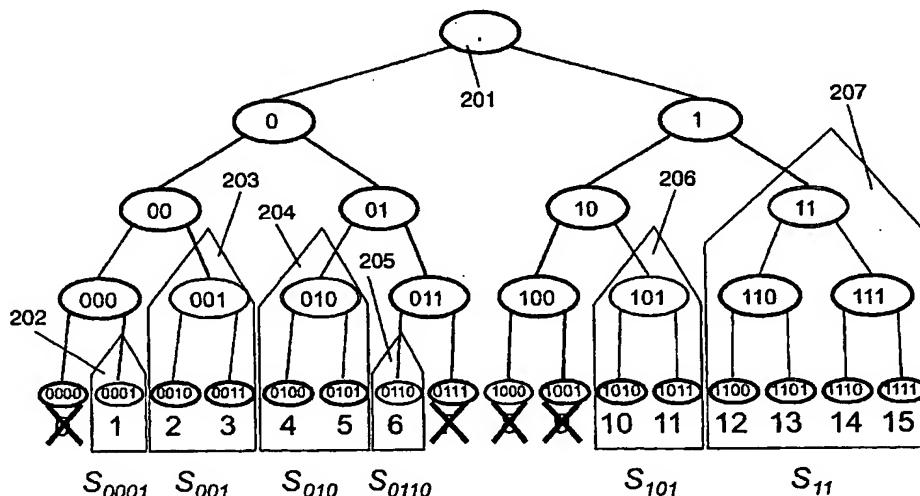
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: METHOD FOR AUTHENTICATION BETWEEN DEVICES



(57) Abstract: A certifying authority provides a method for whitelist-based controlling of authentication of a first device (102) in a system (100) to a second device (103). The method comprises issuing to the first device (102) a group certificate identifying a range of non-revoked device identifiers, said range encompassing the device identifier of the first device (102). Preferably the device identifiers correspond to leaf nodes in a hierarchically ordered tree, and the group certificate identifies a node (202-207) in the tree representing a subtree in which the leaf nodes correspond to said range. The group certificate can also identify a further node (308, 310, 312) in the subtree which represents a sub-subtree in which the leaf nodes correspond to revoked device identifiers. Alternatively, the device identifiers are selected from a sequentially ordered range, and the group certificate identifies a subrange of the sequentially ordered range, said subrange encompassing the whitelisted device identifiers.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/IB 03/02340

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04L9/32 G06F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 932 109 A (YEDA RES & DEV) 28 July 1999 (1999-07-28) page 3, line 25 - line 47 page 5, line 15 - line 18 page 6, line 35 - line 43 page 9, line 8 - line 17	1-3,5,7, 8
A		4,6
A	US 6 397 329 B1 (AIELLO WILLIAM ET AL) 28 May 2002 (2002-05-28) abstract column 2, line 52 - column 3, line 48 column 3, line 65 - column 4, line 10 column 6, line 18 - line 21 column 3, line 31 - line 37 column 6, line 54 - line 65 column 7, line 5 - line 22 column 8, line 52 - column 9, line 20 ----- -/-	1-8

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

10 October 2003

Date of mailing of the international search report

17/10/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Fantini, F.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/02340

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 02 31630 A (KONINKL PHILIPS ELECTRONICS NV) 18 April 2002 (2002-04-18)  abstract  page 1, line 28 - page 2, line 5  page 2, line 17 - line 25  page 3, line 22 - line 26  page 9, line 3 - line 10</p>	1-8
A	<p>WO 01 61591 A (SONY ELECTRONICS INC) 23 August 2001 (2001-08-23)</p>	
A	<p>NAOR D ET AL: "Revocation and Tracing Schemes for Stateless Receivers"  REVOCATION AND TRACING SCHEMES FOR STATELESS RECEIVERS, July 2001 (2001-07), XP002203174</p>	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 03/02340

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0932109	A	28-07-1999	US 6226743 B1 EP 0932109 A2 JP 11289329 A	01-05-2001 28-07-1999 19-10-1999
US 6397329	B1	28-05-2002	NONE	
WO 0231630	A	18-04-2002	WO 0231630 A2	18-04-2002
WO 0161591	A	23-08-2001	AU 3464301 A WO 0161591 A1	27-08-2001 23-08-2001